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ABSTRACT

This newsletter deals with lifelong learning and adult and continuing education. Included in the issue are the following articles: "The Learning Society," by Solveig M. Turner; "Adult Education at the Beginning of the 1980s," by J. Roby Kidd; "Lifelong Learning in an International Perspective: Selected Case Studies," by J. Roby Kidd; "Continuing Education in Australia," by Neville D. Crew and Kevin C. Smith; "On Continuing Education at the Universities and Other Institutions of Higher Education in the German Democratic Republic," by Willi Wolter; "Continuing Education for Engineers in Poland," by Janusz Tymowski; "Northeastern University and Lifelong Education," by John W. Jordan; "Continuing Education at Northeastern," by John H. Robbins; and "Live Instruction at the Workplace Via Television," by Mina B. Ghattas and Michael Theall. A brief bibliography of 10 journals and sources of documentation on lifelong and continuing education concludes the issue. (MN)

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April, 1982

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LIFELONG LEARNING AND ADULT EDUCATION

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Special Issue In Memory of CIHED Advisory Board Member

J. Roby Kidd

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Center for International Higher Education Documentation

Solveig M. Turner, Editor

IN MEMORIAM

This issue of CIHED's Newsletter is devoted to the memory of CIHED Advisory Board Member, J. Roby Kidd, who died suddenly in Toronto on March 21, 1982.

A tireless worker in the cause of adult education during a career that spanned almost fifty years, Roby Kidd's impact was felt throughout the world. He started his work in adult education at the Montreal YMCA in the 1930s and continued to promote adult education in increasingly important positions, such as President of the Third UNESCO World Conference on Education in Montreal in 1960 and first Secretary-General of the International Council of Adult Education in 1973.

He was a giant in the world of international education, honored by governments and international agencies. Yet he never lost sight of the commitments of friendship. It was typical of him to respond positively to our request for a brief article when we started planning this Newsletter in the Fall of 1981. His commitments at the time were heavy and he was troubled that he could not respond with the depth and thoroughness he felt the subject required; yet he did not wish to decline what he felt was a responsibility as an Advisory Board Member. Similarly, he unhesitatingly answered an invitation to speak at CIHED's 1978 Conference "International Developments in Lifelong Learning: Their Potential Applicability to United States Programs", because he felt that U.S. educators needed a greater commitment to adult education and he wanted to help inspire that commitment. Both the article and the speech are included in this Newsletter.

CIHED salutes J. Roby Kidd both as an educator and a friend.

THE LEARNING SOCIETY

Adult education, lifelong learning, recurrent education, continuing education, education permanente - the terms are many for a phenomenon that has become one of the most important aspects of educational growth in the late 20th century: the increase in adult learners. The scope extends from basic literacy training to sophisticated state-of-the-art programs utilizing the latest educational technology.

Much of the impetus for this growth in adult education comes from the need to prepare for and handle career changes and technological innovations in the workplace. No longer does the initial education provided during youth prepare adults for the demands made on their skills during their lifetimes. Increasingly, adult education is changing from a voluntary, nonformal activity concentrating on cultural and leisure time pursuits to more formalized modes focusing on knowledge acquisition for career mobility. This need for continued professional training - sometimes mandated by professional licensing requirements - places new demands on universities, which in many countries traditionally have provided education solely for the 18-24 year age group.

The growth in adult education programs in higher education is also a result of the increasing levels of basic education throughout the world. Research indicates that the more education people have, the more they wish to acquire.

The influx of adults into the traditional university setting requires a number of changes: a willingness on the part of the universities to adapt to the new clientele and to provide an education for them that is different both in teaching style and in program content in order to satisfy learning needs, which are different from those of students who have not yet entered the workplace.

Our articles give examples of adaptations of educational programs for adults, extending from the growing continuing education offerings in East German engineering training to the adult-centered University College at Northeastern University, which is designed to provide what adults need in their educational pursuits: flexibility of time and place and relevance of programs.

The growth of adult education in higher education also is reflected in an increase in the number of journals published on the topic, again, providing a variety of terminology. We have included a sample of such journals in the CIHED Library. Also listed in the bibliography are a couple of special adult education data bases.

Even greater growth has taken place in the adult education programs outside the universities. In his articles, J. Roby Kidd gives an assessment of efforts in several countries that in their totality of effort approach what he sees as an ideal: The Learning Society.

The Editor

ADULT EDUCATION AT THE BEGINNING OF THE 1980s

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Dicken's sentence "This is the best of years...this is the worst of years..." is appropriate as a summary of adult education worldwide in the 1980s.

Over the last 20 years the field of adult education has grown enormously, not only in number of participants but also in the number of trained or partially-trained teachers, tutors, organizers, animateurs and administrators; in the number of countries that have official and organized programs for older learners; in the amount and variety of legislation dealing with adult education in many countries; and in the amount of research and the accumulation of knowledge about every aspect of adult learning. All this is true, yet there are very few consistent records of what has transpired. In most countries the percentage of illiteracy continues to decline, but because of a high birth rate, the gross number of illiterates is still rising and now numbers about a billion people. The figure might be higher as it is an estimate compounded by other estimates.

In some countries, adult education is still very much an amateur affair, without sequence or sustained plan and evaluation, while in others, many of them socialist, adult education mainly is offered as part of the formal system of education. In other countries, the private and non-governmental efforts reach as many learners as do government programs. Worldwide the trend is to an explicit involvement by the government in adult education by: taking direct responsibility; providing financial support to educational institutions for adult classes; or providing financial support directly to the learner. Since the target group in literacy work worldwide is about a billion people, in some countries the number of adult learners surpass the number of traditional students in the school system. A new clientele in adult education, adults who pursue sequential and serious but self-directed programs, is also increasing and this is a figure that was not even included in estimates a decade ago.

While most estimates of financial outlays indicate that increasingly more money is being spent on adult education, the proportion of the total cost to government as compared with investment in the education of children seems only in a few cases to be more than one percent. If one were to judge by the direct outlay the effort would not look very substantial. However, if one estimates costs of media-based educational programs, of institutions such as libraries and museums and of

government supported publishing, the gross is much higher. When one contemplates the cost to individuals from a loss of wages when studying, the sum becomes still larger. Financial support, as in so many other aspects of adult education, will require special techniques for appropriate investigation.

Internationally, adult education is fostered both by inter-governmental organizations and by half a thousand international non-governmental organizations. The most conspicuous program for adult education is that of UNESCO, although the UNESCO department of adult education is and has always been small. The promotion of research and demonstration takes place not only at headquarters or in the UNESCO Regional Offices, but also in such specialized departments as the International Institute for Educational Planning (Paris), the Institute for Education (Hamburg), the Institute of Education and Leisure (Prague) and the International Bureau of Education (Geneva). Major content areas of the UNESCO program -- education about race, about peace, about and for women -- are directed almost entirely to adults, although UNESCO's environmental education program is much more a matter of school classes. The enlargement and promotion of adult education has been affected materially by UNESCO's three World Conferences (Elsinore 1949, Montreal 1960, and Tokyo 1972) and a fourth conference will be held in 1984.

As an operating strategy the concept of adult education for development has been adopted and that means a focus on such content areas as food and primary health care, political education, vocational and technical education, education for population control and a healthy environment. While the rhetoric about adult education is consistent, it is known that some countries continue to use it as a measure of propaganda and control, while for others it is an instrument of freedom and personal expression. The major semantic differences would lie between the countries that stress public and social purposes for adult education and those countries that emphasize individual rights and expression. In many countries, it has been accepted that there is a level of educational provision for adults that constitutes a right (specified by the UN Charter of Human Rights) but full agreement about what is a right and what is a privilege has not been reached.

The other specialized members of the UN family of organizations all advocate and support adult education for their special purposes. In the past three years successive world conferences on Food, Women, Primary Health Care and "Appropriate Science and Technology" have all brought forward the proposition that none of the specialized objectives (primary health care, for example) can be achieved just through the application of more money or more research or more specialized techniques but only when millions of people believe that they could be healthy and learn how to be healthy. This is an impressive change in

concept, recommended by the world conference participants, not by adult educationists, and the latter are thus not fully prepared for such responsibilities. The above observation affects not only the World Health Organization, but also the Food and Agricultural Organization, United Nations Children's Fund, and the International Labour Organization. In the latter organization, the section on workers' education is considerably larger and more consistently financed than UNESCO's total program for adult education.

Because there are so many of them, and their work is so specialized, it is much harder to comprehend trends in the work of the international non-governmental organizations. However, some of the same developments affecting the UN agencies are discernable. While many of these organizations have special goals, a common holistic goal of development is espoused by many organizations. For these institutions, development is often defined in terms of values and human growth, not just or primarily in economic terms. Considerable attention has been directed by some organizations to human rights and to concepts such as peace, subjects that governments often do little about.

NGO organizations are, on the whole, much stronger in non-socialist, industrialized countries. However, in India's present major drive against illiteracy, much of the work is in the hands of NGO organizations. Even in socialist countries, such as the USSR, the kind of organization called 'Znanie', which is regarded in that country as official but non-governmental, has been growing and expanding. 'Znanie' enrolls about six million participants; it features lecture series and conferences, "people's universities" and an extraordinary program for the popularization of science. Organizations like 'Znanie' also have begun to flourish in Hungary, East Germany, Poland and Czechoslovakia.

Internationally, the strong NGO organizations are associated with libraries (International Federation of Library Associations), labor organizations (four different international bodies), cooperatives, the YMCA, the YWCA, and the churches. While it was only organized in 1973, the chief agency for adult education worldwide is the International Council for Adult Education. Its headquarters located in Toronto, ICAE is a non-governmental, voluntary partnership of individuals and organizations working together to promote the education of adults. It now comprises national and regional member associations in some 60 countries. Through its member associations, the Council works to provide an international network and a coordinating focus for adult education. The Council considers adult education as integral to all economic, social, cultural and political developments and to the self-realization of each person. The Council is concerned with, among other areas:

- Leadership training of adult education practitioners at all levels
- Research on adult education
- Information exchange, seminars/workshops, journals and cooperative publishing
- Contributing to adult education as a field of study
- Advancing the knowledge, skills and competencies of individuals and groups.

For more information:

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LIFELONG LEARNING IN AN INTERNATIONAL PERSPECTIVE*
SELECTED CASE STUDIES

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You have asked me to review some international case studies of lifelong learning. That is appropriate because people other than North Americans have contributed significantly to the concept. To offer the best example I know would require a shift in time, back to the Arabs. In many ways, the most complete example of a learning society which offered a rich environment for, and encouraged the expression of, lifelong learning was the early Abbasid Period of the Arab-Muslim community - a time more than a thousand years ago. That society was not only the intellectual center of the entire world at the time, and the home of universities that still flourish, but it was founded on a notion of "pursuing learning from the cradle to the grave" - almost the first injunction commanded by Mohammed in the Koran. Education and medicine were regarded to be of such consequence that they were literally priceless, that is, they were offered without cost, and there was easy access to learning by children, youth, and adults in structured and informal settings, close to the home, the Mosque, the seat of government, the parks - wherever human beings chose to frequent.

The chief conditions or characteristics of Lifelong Learning or Lifelong Education (and I am using the terms interchangeably) have been identified. They include:

DIMENSION - A vertical dimension covering all of life, a horizontal dimension covering all kinds of subject matter, and an inner dimension linking study to human experience, expression and growth.

EDUCATIONAL COHERENCE AND ARTICULATION between and among pre-school elementary, secondary, university and post-secondary forms of education - all operating within an interacting system.

*This was a speech given by J. Roby Kidd at CIHED's Second Annual Conference in 1978 on International Developments in Lifelong Learning: Their Potential Applicability to United States Programs.

NON-FORMAL IN ADDITION TO FORMAL ELEMENTS - Non-formal activities for all ages, associated with such institutions as libraries, galleries, museums; the arts; training associated with work; various kinds of self-initiated or self-directed studies are also included within the system.

ACCESS AT MANY STAGES - Learning is organized not only for all ages, but offering many points of entry and exit. Decisions are made by the learner with the aid of information and counseling.

ACCESS WHERE ONE LIVES OR WORKS - Learning activities are provided through a delivery system that reaches people where they live, work, consume, have their leisure, and at times that are suitable to them.

REFORM - Most statements about lifelong learning assume that an application of the concept will lead to a reform of the whole system of education, democratizing it and increasing the participation and the responsibility of the learner.

There is no complete system of lifelong learning today in full operation. However, a number of countries or territories do exhibit many of the characteristics and three cases will be noted where some, if not all, of the above factors are present.

Some developing countries have seen more promises in lifelong learning than countries with established traditions or have felt the need for concentrating scarce resources on an articulated system. However, no attempt has been made to provide singular or exotic examples and as far as possible, cases are presented which are worthy of analysis if not emulation.

I. An Operating System But Limited To A Small Population: Tanzania

The country that is most deserving of the label "learning society" is Tanzania. It is the custom in many African states for the political leader to be given or to award himself a title. Julius Nyerere is "Malimu" teacher. In earlier times, when Nyerere would be working on a new project or bill, even before he took it before his political party or to Parliament, he would go to the Institute of Adult Education, meet with a group of faculty and adult students, and talk over the new proposal with them, noting carefully their reactions, questions, suggestions.

In socio-economic terms, Tanzania is one of the poorest countries in the world but it is attempting to use well its human capital. There are four components to its system of higher education:

1) The University of Dar es Salaam, rather traditional in what is offered in the arts and sciences and with several professional schools. However, you do not obtain entry to this university by graduating from a secondary school: such graduation entitles you to nothing more than to become a good citizen. To be accepted into the university, you must give satisfactory evidence that you possess intellectual qualities; have a career goal that requires higher education as a preparation and must have performed well over several years in some vocation or public service.

2) There are several research institutes and stations, linked both to the university and government. Research that has a demonstrable social purpose is given priority.

3) The Institute of Adult Education, no longer a division of the University, but a national training institute for people who teach adults in every field as well as those who are managers and organizers of the delivery services (village management, food programs, handcrafts, health and fitness, cooperatives, those responsible for safety and production training, etc.).

When I first knew the Institute, it had a staff of one American, one Englishman, one Australian, twelve Swedes and fifteen Africans. Now there are over 100 Africans, most of them well-trained.

4) Kivukoni College, now operating from five centers, the Institution in which members of Parliament, civil servants and others who must help train or govern the people are themselves trained to understand and participate in Tanzania's social programs. On my last visit to Kivukoni, the students were the 78 headmasters of every secondary school in the country, all engaged in a nine-month program of learning about Tanzania and its social goals, including four months of planting crops and trees, physical education and military training.

Those who teach self-reliance are expected to learn self-reliance. Everyone in Tanzania may be expected to help teach others from his experience and everyone is expected to continue to learn and develop the skills needed by society.

A feature of Tanzanian life is that rural people who earlier were scattered, are now all grouped in a number of Ujama villages in which are found schools, libraries, training and cultural opportunities, co-operative and self-help production and marketing schemes, each with its training facilities. Naturally enough, since these villages have been in existence less than two decades, they do not all function equally well, but some are remarkable and each offers many forms of education and training for people of all ages. The main entry requirement is willingness to learn. The village is the base for literacy classes for adults, and for a series of national educative campaigns in health, nutrition, education of women, etc. Such activities are given social approval, positively from the President and Parliament, and through endorsement on the radio and other programs; negatively by certain restrictions such as closing all the taverns at the time of literacy classes.

The relatively few cities have the same kinds of services. A Tanzanian law requires that every employee be not only permitted but required to undertake study or skill training such as work skills, literacy, safety education, and first aid. The army also has a major program of education and training.

The formal schools, both elementary and secondary, are required to provide for children and adults: teachers for literacy or other nationally approved programs usually come from the ranks of school teachers or from professional personnel and students who volunteer and are given special training.

Paper for printing is not plentiful so it has been decided that use of paper for government and education comes first. The radio service is also engaged for national purposes and educational needs are paramount. The way that other services support education can be illustrated from the practice of advertising national social campaigns. Instead of using the mimeograph or printing posters, the campaign slogan or message is printed by a factory on cloth and is so popular as a garment that the message will be carried in dress form by thousands of women. At present a serious effort is under way to develop literature, books, learning materials in Swahili, the national language.

Tanzania is poor; Tanzania has one national language; Tanzania is relatively small with a population smaller than Massachusetts, and it is a one-party state which does not permit many alternatives. It is not possible or likely that the United States, or indeed many other states will copy the Tanzanian educational system. But several of the features - for example the method of selecting candidates for university with an emphasis on purpose and performance, and the role of Kivukoni College in training for national leadership, are worth close examination, as is the dedication of education and communication to national purposes.

II. Target One-Hundred Million: India's National Adult Education Program

Few countries, except the USSR, China, India and perhaps Brazil are of a size and complexity that is in any way comparable to the United States. No country, not even China is so diverse as India. While China may have a hundred minorities, they are comparatively small. At least 90 percent of the total population belong to the great Han people. India has no single dominating people and few rivals for number of religions, and the number of distinct groups.

In lifelong learning, India has developed a national adult education program, aimed at people in all parts of India. This new effort is to be a concentrated campaign, but lasting over ten (10) years. This new effort is not a design or commitment to lifelong learning, but it is to be sustained for a decade and is intended to lead on to continuing education.

> "The objective is to organize adult education programs, with literacy as an indispensable component, for approximately 100 million illiterate persons in the age group 15-35 with a view of providing them with skills for self-directed learning leading to self reliance and an active role in their own development and in the development of their environment."

In addition to its audacity, the plan has a number of new features:

1. In Indian terms, it will be well-financed: money has been voted for five years.

2. The need for an infrastructure has been considered:

   "Establishment of necessary structures"

   "Identification of various agencies, official and non-official to be involved and taking necessary measures to facilitate the needed level of involvement"

   "Development of training methodologies, preparation of training manuals as well as actual training at various levels"

3. All departments of the national and state governments will be invited and expected to co-operate in the program.

4. A very large part of the program will be carried by non-governmental agencies with financial, training and technical support from the national program.

5. The plan will be developed in stages, with two years given to preparation and training.

6. "Creation of a satisfactory system of evaluation and monitoring as well as the required applied research base."

7. The national program does not replace what exists, it complements established agencies and gives direct support to programs already begun by universities, in integrated rural development schemes, and those directed specially to women.

It is true that there have been earlier grand plans and projects in India, full of rhetoric about human dignity but also full of contradictions, but those who know India will realize that the new program advances considerably beyond past projects for social education and literacy. It is better financed, better designed, seems to have achieved ministerial and state co-operation, is based on sound methodology, and has a time base (ten years) that may be realistic.

It is far too early to know if it will be successful or what part of it may be applicable elsewhere. However, there are some interesting aspects:

a) The concept of phasing.

b) The use of non-governmental agencies that in volume goes beyond what is common even in North America.

c) The attempt to achieve co-operation of separate ministries and separate states.

d) The system of monitoring and evaluation.

III. Community Centers for Lifelong Learning: Workers' Universities in Yugoslavia.

The notion of lifelong learning has been accepted readily in most socialist countries partly because the state already had control over the complete educational system. In practice, as well, many of the leaders of the revolution had been men and women who had obtained their education outside of universities and, because of personal experience, favoured a range of educational means, or advocated giving the greatest opportunities to those

who had demonstrated service to society, not just intellectual attainments. It is no accident that the best contemporary example of an education in the mode of Abraham Lincoln was that of Nikita Khrushchev. At eighteen, he was still formally illiterate but was then given, and took, many opportunities for education throughout his subsequent career.

Most socialist countries exhibit some of the aspects of lifelong learning, typically within the official system, supplemented with educational opportunities in cultural and sports clubs, and with ample supplies of literature, music, libraries. Those who are able and well-motivated can find their way without too great difficulty.

In Yugoslavia, there have developed two (2) additional kinds of institutions that have taken seriously and specifically the goals of lifelong learning, the Workers Universities and the Polyvalent Centers.

The Workers Universities are found in all cities, towns and most villages. They are not articulated with the traditional universities, but students who make excellent progress are assisted to transfer. In some respects, they are more like American community colleges - they offer courses of instruction in a range of activities with choice of curricula coming from the community. Some courses last only a few weeks; others continue for two to three years. Typically, they are offered in, or close to the factory but they are open to all youth and adults who wish to enroll and participate. There are no regular fees. Some participants, as they might in American high school adult education classes or university extension, will continue to enroll year after year since these are universities of continuing education, not a preparation for a career, although there may be vocational or re-training aspects. The colleges also provide for much of the education associated with politics and social development.

The Polyvalent Centers, on the other hand, provide a range of experience where people perform and practice, not just study. They play music rather than learn about it, they act in plays, they write, paint, make crafts, travel, and camp. In some cities, the two institutions, University and Center, are side-by-side, and cooperate fully. In all cases, they are intended to be complementary, both of them being ways by which people can continue to participate in education throughout a life-time.

OTHER INITIATIVES

Lifelong learning comprehends a system and a range of factors that have rarely been brought fully together. However, in many countries there are developments or demonstrations of some of the factors that are significant and may have value for international borrowing.

An obvious example is the development of various approaches to "open access learning", and "distance learning" of which the Open University is the best known example. Poland had developed a combination of experiences which made it possible to give ten thousand technologists advanced standing as engineers, in three years time, while still working at their job, with marks that were well above the standard for full-time students. Similar experiences have been recorded in several other European countries and Japan and, of course, in the United States as well. It has now been demonstrated, beyond doubt I think, that an appropriate combination of educational technologies with some face-to-face contacts can deliver education of many kinds and depths, in the locations where people live, over a lifetime, and at modest costs.

Mention has been made earlier of the examples of countries (Tanzania and the USSR are just two of many) where life experience has been assessed and utilized to open up learning entrance. The notion of the "educredit" made available to individuals or to corporations through remission of income taxes in support of continuing education has been tried out in some countries, such as France. Valuing the educational quality of life experience, and finding equitable ways of providing incentives for continuing learning are two central questions of considerable importance to North America.

As far as I know, although I may be wrong, there are no measures in countries outside of Canada and the United States to make re-certification in certain professions mandatory or to designate so many clock hours of course attendance as the criterion for re-certification. Those I have talked to about this development, while they too wish to find means of stimulating people to continue to learn, are either skeptical or scornful about these measures, and ask what relationship has been discovered between clock hours and maintained or improved professional performance.

Eight countries in Europe, including France, Germany and Sweden have passed laws in support of the ILO convention on paid study leave to enable people in the work-force to continue to learn. However, these measures are so recent that there has not yet been time to evaluate the results. However, this is a

field of study that has implications for North America.

In general, the Scandinavian countries seem to have been able to engage their citizens in study of public issues, over long periods of time, as successfully or more successfully than other countries. It is an interesting fact that the study circle in Sweden, an early form of adult education, has come back stronger than ever. Probably thirty percent or more of all men and women in Sweden go systematically to a group association where they are able to talk together and consult each other's experience concerning the urgent questions of the day - the environment, morality, civil liberties, foreign policy, participation of citizens in social change, etc. This is an aspect of lifelong learning, the continuing participation of citizens in life-and-death issues, that is a significant part of the concept but not always found in practice.

Because the concept of lifelong learning has universal coverage, there opens at least a possibility that countries might learn from each other. Whether they can do so effectively remains to be seen. Yet, we are all in this together and mutual exchange, despite our differences, may be mutually valuable.

CONTINUING EDUCATION IN AUSTRALIA

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Continuing education in Australia, as elsewhere, assumes many forms and is offered by a variety of agencies. Non-credit programs, under the general rubric of adult education, are available through university extension departments, state departments of education and further education, rural extension services of state departments of agriculture and voluntary associations such as the Workers' Educational Association (WEA). For the most part, these programs are presented in face-to-face situations, especially in evening classes or residential seminar type formats, but there are also courses by radio, circulating boxes of books or "kits" for group discussion, and correspondence courses. On the other hand, there are many courses leading to degrees and diplomas which are offered to the community at large by some universities and colleges and state departments of technical and further education through what is known in Australia as "external studies", but might be better understood elsewhere by terms such as "independent study", "home study", "distance education","correspondence education" or "open learning". The following overview examines each of these two broad areas in turn.

Non-credit or Informal Adult Education

Within this sector, three major streams of activity can be identified: university adult education, technical and further education and community education.

Non-credit or informal university adult education is a clearly identified stream which has changed considerably over the last twenty years. Originally based on the tutorial class and a relationship with the Workers Education Association developed by Mainbridge and Tawney in England, university extension has developed specialist short course activities. Essentially the university extension movement in Australia was an inter-war feature of adult education with the traditional relationship between the Workers Education Association and universities prevailing until about the late 1940s. Ultimately, though, political controversy in Queensland and reorganisation in Victoria and Tasmania led to the establishment of special state Boards of Adult Education which have persisted until recently when they were merged with Technical and Further Education departments. However, universities in New South Wales, South Australia and West Australia have continued to be major providers of adult education in their states.

University adult education has been the center of debate by governments concerned with the role of such work in universities. While the state governments allocated money for university education, the universities developed differently as autonomous state bodies but when the Commonwealth government

assumed responsibility for financing all universities - and later all tertiary education - it developed policies to be implemented in a similar manner through the states. Consequently, adult education, which was the concern of Boards in some states and of universities in others, was subjected to considerable scrutiny by the then Australian Universities Commission, the body which advised the government on university funding. The Commission, and its successor, the Tertiary Education Commission, recently recommended that universities should be involved in professional and refresher adult education and that such activities should be financially self-supporting. At most, only one percent of recurrent funds granted to universities is to be allocated for salaries or similar overheads to support adult education. Australian universities through their faculties or special departments are thus inclined to promote professional and refresher short courses which are financially viable rather than liberal arts adult education in the English and American tradition. Consequently, the latter has become a minor segment of non-degree education in universities.

The second major development is in the area of technical and further education. Previously the neglected area of educationists and policy makers, the needs of Australian industry as well as the philosophy of the Whitlam Government stimulated a more positive interest in this field of education.

The Australian Committee on Technical and Further Education was appointed in April 1973 to advise the government on the financial assistance to be provided to the states from July 1974. The Committee had just twelve months to enquire into developments in industry, and the system of technical education in the states, as well as plan the future of Commonwealth responsibility for such education. Chaired by Myer Kangan, former Deputy Secretary of the Australian Department of Labour, the report, T.A.F.E. in Australia, was completed in April 1974.

The Committee which adopted a wide definition of technical and further education regarded technical and further education as including "all organised and sustained programs designed to communicate vocationally oriented knowledge and to develop the individual's understanding and skills... It should include all programs with a vocational purpose... whether the individual is using the program with employment as a primary aim or with the aim of gaining additional specialised knowledge or skills for personal enrichment or job improvement". In other words it included what is usually known as "adult education".

Generally the Kangan Report took a refreshing view of technical education - lifting it from that of the narrow mechanical training to the wide range of vocational education required of modern industry. It included specific recognition of the need for vocational and technical refresher education

with a strong recommendation against using either the length of courses or their complexity to discriminate against technically capable students not suited to academic forms of education. It recommended $9.81 million as an immediate grant together with another $9.81 million for specified purposes to supplement the existing expenditure of the states. Most of this money was to be spent stimulating curriculum research, shifting emphasis to the needs of the individual, enlarging inservice training for staff and generally improving the intellectual resource of staff to be effective as teachers.

Since the report, technical education has expanded considerably, both in the numbers enrolled and the quality of the education offered. Teacher training has improved rapidly and new approaches to curriculum and evaluation adopted. In general adult education, T.A.F.E. has taken responsibility for literacy work with aboriginals and migrants and has evolved an "outreach" project. Both these developments have required specialised appointments as well as earmarked funds. The literacy project is self-evident. Outreach is, however, somewhat unique. Special staff are employed to seek adults needing education. The most successful work has been in the inner city areas where isolated migrant women have been assisted to learn new skills within their own ethnic communities. It is possible to see the development of informal adult education in T.A.F.E. through Outreach, though this will never replace the essential solid vocational programs required by Australian industry.

The third development is with community education. This has occurred only recently in two states, and has been the subject of North American influence. Victoria has experienced most success, some sixty officers being appointed last year to the state education system. Still in its early stages, community education represents something of a conflict between school and adult education. It is not clear whether community education is designed to enable the school and its pupils greater access to the community, whether it is to provide school facilities for adults involved in sequential learning or whether it is a combination of both to gain social acceptance of school education. This will be resolved as community education is debated within the educational profession and the parliaments of the states concerned.

Only three broad streams of adult education have been discussed here. In keeping with practice both in the United Kingdom and North America, the public service and the professions have developed considerable adult education programs. No one yet has researched the extent of adult education in the churches though their programs are considerable.

External Studies

A decade ago, external courses were offered at the tertiary level only by three universities and two institutes of technology. With the advent of colleges of advanced education in the 1970s, however, the position changed dramatically and there are now five universities and about thirty-five colleges involved in a wide variety of external programs. The external student population in Australia is about 34,000 which represents about 10% of enrollments in universities and colleges and there are 60,000 or more external students in the technical and further education (T.A.F.E.) sector.

The first significant attempt at offering external courses at the university level was made in 1911 by the University of Queensland. Australian residents living outside metropolitan areas in other states had no alternative but to attempt a London University external degree which was completed only by the most highly motivated and persistent students who managed to survive working in complete isolation. It was not until 1955 that country residents of New South Wales had a similar opportunity to study to that available to Queenslanders, when the University of New England as a new autonomous university stepped into the breach, basically to serve the needs of high school teachers in country areas seeking to upgrade professional qualifications. Since then the proportion of teachers has diminished from 80% to about 30% now that wider course offerings cater to other professions and attract a significant number of people who simply wish to broaden their educational horizons without necessarily enhancing career prospects.

Macquarie University in Sydney (1967), Murdoch University in Perth (1975) and Deakin University in Geelong (1978) followed. These five universities and thirty-five colleges are located in every state in Australia and now constitute a national network of educational opportunity at the tertiary level for anyone who considers he or she can benefit from it. One of these universities, the University of New England, with which the authors are most familiar, might be usefully examined as a microcosm of the total system.

The University of New England

The University of New England at Armidale, New South Wales, is a medium sized university by Australian standards with a student population of 8,500 of whom 6,000 are external off-campus students. Armidale is a small country town of 21,000 but basks in the title of a city by virtue of its two cathedrals. The University is essentially a residential university which can provide on campus college accommodation for almost 2,000 students. This has been a significant factor in the development of an external teaching philosophy that insists on external students spending short but intensive periods of residence at the University to meet academic staff and other students during residential schools when the traditional internal students are away on vacation.

External studies at the University of New England began in 1955, the first full year after the University achieved its autonomy. In that year 363 external students enrolled in a handful of courses offered toward the B.A. degree and the Diploma in Education. Now the 6,000 external students are enrolled in five first degrees, a Bachelor of Letters degree, nine postgraduate diplomas and four Masters degrees. Well over 300 courses are offered in 34 subject areas.

With the exception of the University of Queensland which, for the most part, appoints academic staff to its Department of External Studies to teach external students exclusively, the New England model has provided the essential theme on which subsequent institutions have played their own variations. Such a model is characterised by having the full-time academic staff appointed to teach and assess both internal and external students in similar courses. This highly "integrated" model is virtually unique to Australia and has certain positive features which are not generally present in off-campus programs in other parts of the world. First, parity of standards between internal and external students can be demonstrated and second, the institution's best scholars and teachers are made responsible for all aspects of the external teaching-learning process including course design and presentation, marking of assignments, final assessment and personal contact with students at weekend and residential schools and by telephone. The demands of teaching in two modes are recognised by the maintenance of appropriate staff-student ratios through the imposition of enrollment quotas.

The Director of External Studies at New England is responsible for the coordination of the system which involves 35 academic departments in four of the University's six faculties or schools. Students are taught mainly through the printed word, consisting of study guides and supplementary reading material but various forms of face-to-face contact at compulsory residential schools and voluntary weekend schools are also considered essential for the development of good relationships between staff and students and among the students themselves. Audio cassettes are in use extensively and video cassettes are being used experimentally. Forms of computer aided instruction and telephone tutoring are also being developed. In short, the New England model strives not so much to develop a totally independent study mode but rather to achieve a blend of independence and interaction, that is, interaction with one's learning materials, staff and other students. The essential challenge, therefore, is to get the mixture right for the majority of students.

The Director heads an administrative department of 40 staff members with a wide variety of functions. These include the enrollment of external students, the monitoring of their

progress, the provision of advisory and counseling services for students, the organisation of residential and weekend schools, the maintenance of a comprehensive student filing system and statistics, representation on faculties and other decision-making bodies within the University and making visits to students on a regular basis each year. One of his most central responsibilities is the production and distribution of teaching materials in over 300 courses which are prepared by the teaching staff of the department concerned.

Conclusion

The interests of non-credit and credit programs for adult students are served respectively by two national associations, the Australian Association for Adult Education (AAAE) and the Australian and South Pacific External Studies Association (ASPESA). Such associations provide effective networks of educational opportunities that make it possible for Australians, wherever they may live within this vast island continent, to have access to a wide range of courses taught in different modes to suit individual circumstances. Lifelong education is no longer just a pious hope but a reality in this context for those who wish to avail themselves of it.

ON CONTINUING EDUCATION AT THE UNIVERSITIES AND OTHER INSTITUTIONS OF HIGHER EDUCATION IN THE GERMAN DEMOCRATIC REPUBLIC[1]

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Mainly due to the impetus of the scientific-technological advances in the past few decades, professionals are faced with the necessity of continually updating and expanding the knowledge and skills they acquired in college to ensure that they will continue to be able to meet the demands made on their professional skills.

A great number of programs have been developed to meet the growing demands of further education and many countries now are incorporating planning for continuing education as an important part of their overall educational planning. Practical experience has shown that the universities and other higher education institutions can make an extremely effective contribution to professional further education. To accomplish this, which--in many countries--is a new task for the higher education sector, it is important to bear in mind that continuing education differs from undergraduate and graduate study because the programs are aimed at learners with professional experience and knowledge of the demands of the world of labor. Although much research has already been undertaken on continuing education, we can assume that it will be some time before the results of such research will be fully implemented on a day-to-day basis.

In the 1960's, the institutions of higher education in the German Democratic Republic started programs in continuing education in different fields and over the years, continuing education has become an important activity at our institutions of higher education. Its growth can be seen from the following comparison: At the end of the 1970's, the universities and other institutions of higher education enrolled more than 30,000 participants per year in the two main kinds of continuing education, i.e. correspondence courses lasting from 2 to 4 semesters and specialized courses of from one to several weeks. This is an important growth when compared to the approximately 100,000 full-time undergraduate students at the 53 universities and other institutions of higher education in the country. The fact that the number of students enrolling in continuing education is surpassing the number of entering full-time students (25,000) also gives an idea of the degree of involvement by the universities in continuing education. Thus, the Minister of Higher Education and Technical Education of the GDR could state with full justification at the Fifth Conference on Higher Education in the GDR in 1980 that the growth of continuing education was an outstanding characteristic of the development of the institutions of higher education in the 1970's.

The higher education sector has been given the task--in cooperation with its partners in industry--to increase the variety of opportunities in continuing education to correspond to increases in undergraduate and postgraduate training and in research. The continued growth of the number of graduates from higher and technical education will bring about an increased demand for continuing education in the next few years. Thus, at the Conference on Higher Education mentioned above, the Minister of Higher Education and Technical Education stated that "in the next ten years, continuing education will acquire the same status as undergraduate and postgraduate education and research."2

A relatively close and successful coordination of the curriculum in postgraduate studies and continuing education was put into effect in the study of medicine in the GDR a few years ago. The training of a doctor lasts 6 years; of a dentist, 5 years. This is followed by a compulsory training at the postgraduate level; every doctor and dentist has to acquire a further specialization and, irrespective of the field of medicine in which he/she has specialized, is obliged to keep abreast of the latest developments by taking part in further training.

For courses in the sciences, for example, in the engineering sciences, there are limits to the opportunity for a transfer of this model due to the differentiated educational demands of the field. These concepts were taken into account in the 1970's when work started in the GDR on new or revised courses for undergraduate and postgraduate training in the different academic subjects and continuing education courses were outlined at the same time as the basic courses. As an example: the curriculum for the basic course in machine engineering (developed in 1973) states expressly, "Further education is based organically on undergraduate/graduate studies according to professional requirements." In the 1973 plan of studies, there were 12 fields in which it was possible to achieve specialization by means of continuing education courses. The revised 1977 plan of studies included 14 such fields.

Altogether, the number of continuing education courses has been steadily extended in the past few years and at present comprises more than 160 courses in the fields of natural sciences, technical and economic sciences, agricultural sciences, and education. In the next few years, opportunities for continuing education will be further improved.

Generally, long-term continuing education has proven successful for those specializations that require theoretical studies on a high level. The courses are interdisciplinary and contain both

subject-specific material as well as related relevant study from the social sciences, natural sciences, and technical study. The curricula of the courses vary depending on the objective in the specific subject. The success of the students in individual courses is checked by means of tests and completion of the whole continuing education course requires a final thesis. A certificate is awarded to those successful in the course.

To carry out such a relatively comprehensive course without a significant break in the participants's professional work, the form of correspondence study was chosen. This has resulted in a relatively long study period of from 1 to 2 years. As stipulated by law, the participants receive 36 days off per year with full salary by their employers to attend different sections of the course, such as introductory lectures, seminars, colloquia, exercises or field work. The participants are granted an additional four weeks off from work to write their thesis, which must deal with problems in their current position.

Our experience gathered over more than 15 years of systematic continuing education confirms that it is especially suitable to closely integrate undergraduate/graduate studies and continuing education, because continuing education not only adopts itself to the content and conditions of further education, but also has a retroactive effect on the content of undergraduate and/or graduate studies. There is no doubt that the useful interaction between adult learners and students in the future will become still more effective because of improved coordination of the relationship between education in basic and specialized courses in undergraduate education and postgraduate training and continuing education. This is the aim of the present efforts to further develop continuing education. The primary objective must be the further specialization of the university graduates according to the demands of their profession even if a secondary objective is to refresh and specialize knowledge, particulary for older graduates. Because of the relatively long study period for these special courses compared to other forms of continuing education and the high expense there is a tendency to implement them in those fields that require continuous updating.

On the other hand, preference is given to short courses if the need is to impart the latest findings or to extend specialized knowledge in limited fields, as for example the latest technology, processes, and methods. Short-time courses are more flexible when it is necessary to react rapidly to new educational demands by industry as continuing education can help contribute to the quick application of the latest scientific findings in rapidly developing fields. That is why in setting the objectives and deciding the content of short-term courses it is not so much a

question of considering the content of previous training, but rather to maintain the close relationship to research.

As the economic efforts in the GDR are oriented to speeding up the scientific-technological progress to achieve further economic growth, short-term courses have become more important in the past few years as a way to quickly expand and apply the latest results of research in continuing education in the institutions of higher education. Since such courses have proven successful as a university-specific form of professional training, this tendency will be developed more strongly. At present, the courses show a relatively great heterogeneity, including the length of study. Whether new prototypes will be developed for specific groups in the future cannot be assessed at present, but it can be stated that, for instance, the so-called problem seminars introduced at some institutions of higher education have proven very effective. In these problem seminars, which last from one to two weeks, highly qualified specialists from industry and other areas carry on a mutually enriching exchange of opinions with scientists of the institution.

Just as we considered continuing education in connection with undergraduate/graduate training, a similar assessment can be made in regard to continuing education and research, which has developed into a integral part of the task of the universities and which will affect their development more and more.

In conclusion, it can be said that an efficient system of further training has been created in the GDR which, in close cooperation with undergraduate/graduate training and research, contributes to help graduates master increasing knowledge demands. In view of the growing significance of continuing education, great attention is paid to its development especially at the universities and other institutions of higher education in close interaction with undergraduate/postgraduate studies and with research.

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1. Revised version of a lecture given by the author at a seminar organized by the Federal Ministry of Science and Research of the Republic of Austria and the Ministry of Higher Education and Technical Education of the GDR in December 1980 in Vienna.

2 Hans-Joachim Bohme "The contribution of the universities and the other institutions of higher education to social progress and to strengthen the performance of our country in the 80s," in Fifth Conference on Higher Education of the German Democratic Republic, Berlin: Ministry of Higher Education and Technical Education, 1980, p. 68.

CONTINUING EDUCATION FOR ENGINEERS IN POLAND

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(Retired)

In 1972, the Association of Polish Mechanical Engineers (APME) for the first time organized courses for the so-called Specialization of Engineers. The objective of these continuing education courses is to raise the professional qualifications of engineers by:

- adding to their knowledge and ability within a given specialization;
- developing their self-assurance and initiative, as well as their interest in continued professional self improvement.

The courses utilize accepted independent study techniques under the guidance of tutors and professors who either are professors from universities or research institutes or distinguished specialists from industry.

The courses are run by the APME Group of Centres for Improving Staff Skills under the supervision of a Scientific Council appointed by the Managing Board of the APME Association and lead to an academic qualification.

Admission

The courses accept only graduates of higher technical education institutions with at least a three year experience in the area of specialization acquired at the university or, in cases where the current area of specialization is not linked with that acquired at the university, a five-year practical work experience. Candidates must be recommended to the courses by their employers who are required to pay the costs of the courses. The employer submits the application card which gives information about the candidate's professional experience, his or her achievements, and a proposed topic for the diploma project. The Scientific Council then makes its acceptance on the basis of the application card and, in some cases, after an interview.

Curricula

As educational needs generally vary for each candidate, the curricula are set individually. The study period lasts from one to two years depending on the extent of the participant's professional knowledge on entry to the course, the subject, and the time needed for completion of the diploma work. The curriculum includes two stages which overlap, i.e.:

1. The first stage, which is theoretically oriented, covers the first 1-1½ years and gives the participant credit for (a) a theoretical subject (selected from among mathematics, physics, mechanics, or another area of science) and (b) for a technological subject selected from an area related to the participant's diploma project, which focuses on the present state of the art in design, production techniques, or work organization.

It is also possible to include in the program another supplementary subject of a non-technical nature, such as ergonomics, the sociology of work, etc.

During this stage of the program the scope and subject matter of the diploma project are defined in detail; research and tests are undertaken; and the design, the production engineering, and/or the organizational elements for the practical implementation of the diploma work are developed.

2. In its initial part, the second stage of the program may be parallel to the first stage. It lasts one year or less and consists of a practical application of the subject of study. The curriculum during both stages provides for participation in laboratory classes, scientific conferences, visits to factories, and other industrial training.

The Course of Studies

For each participant in the courses the Scientific Council designates a professor who will confer the academic qualification. He or she is selected from among professors at the universities or from among scientific workers at research institutes.

The selected professor acts as the study director, provides guidance and assistance to the participant in defining and preparing her/his diploma work and in selecting suitable literature and other materials. The professor also offers advice on the scope of the diploma work as well as general supervision. The subject of the diploma project, which was indicated by the employing firm on the application card, should be one of special importance to the employer. It is also desirable that the subject be related to the candidate's actual duties in the firm and make allowances for his or her personal technological interests.

Each participant will be offered eight consultations with the professor while preparing the diploma project. During the first consultation, the professor and the participant agree on the whole program of study and, particularly, the plan for the diploma project and for the two related subjects. The professor appoints the tutors in these subjects from among persons approved by the Scientific Council.

The assigned subjects and the terms for the awarding of credits for the courses, as well as the period for the practical application of the diploma project, also must be approved by the management of the participant's firm. This approval means that the employing firm is obligated to support the participant in his/her studies and to introduce the diploma project in its production.

The requirements for graduation

To graduate the participant must:

- Pass the examinations in the two selected subjects;

- Prepare a diploma project acceptable to the professor who will confer the degree and to the reviewer. The quality of the diploma project is expected to be higher than one prepared for a master's thesis, especially as regards utility to the firm. The diploma project must be submitted in a written format with drawings, graphs, and photographs as necessary;

- Apply the diploma project in the firm within the established time limit and, at the same time, show what technological and economic effects as well as non-monetary awards result from the new project. The above results should be substantiated by the firm;

- Pass the final examination which requires that the thesis of the diploma work be substantiated and a knowledge of the related subject matter be demonstrated.

The examining board consists of the chairman, who is appointed by the Scientific Council, the professor who will confer the degree, the respective tutors, as well as the reviewer, and the representative of the course management. It is also desirable that a representative of the employer be present.

The participants who were graduated from these courses during the years 1974-80 have substantially improved their job performance and their various diploma projects have brought considerable advantages to the employing firms.

NORTHEASTERN UNIVERSITY AND LIFELONG EDUCATION

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UNIVERSITY COLLEGE

From its inception as a School of Law in 1898, Northeastern University has been dedicated to providing education for adults. Then, as now, the adult programs encompassed both degree offerings and supplementary education to persons less concerned with the accumulation of academic credentials than with the acquisition of new skills in areas in which they were already employed or wished to be employed. Some of Northeastern's earliest schools, such as the Automobile School (1903), the School of Advertising, the School of Applied Electricity and the School of Commerce and Finance (1907) were established with this commitment in mind.

The first "day schools" were not established until 1909 when Northeastern became the second institution in the country to introduce cooperative education programs in its engineering offerings. The evening programs grew and changed over the years in accordance with national developments and local educational needs. The guiding principle remained the same: the provision of programs for adult students that were flexible both in location and in program offerings.

By 1960 it was decided to consolidate all the adult education degree offerings under a new academic unit called University College. The new College made no attempt to duplicate day school offerings, but provided certificate, associate and bachelor's degree programs that cut across different subject matters and were particularly suitable to the requirements of adult students.

The College developed an open admissions policy that enabled any adult with a high school diploma or the equivalent to begin an undergraduate education with minimum restrictions. Nevertheless, because the College was also committed to a uniformity in degree standards, admission did not automatically mean matriculation. Rather, the College categorized all students as special or nonmatriculated students until each earned forty credit hours with a C average.

The College also abandoned the traditional notion that courses must be offered in conventional three-hour-a-week sessions spread over a semester. Instead, the College adopted a time schedule specifically tailored to the needs of students whose busy lives might not allow them a commitment of three evenings for study or even a commitment of fifteen weeks. Many courses were redesigned so that material could be covered in one-hundred-minute periods offered once a week, or in intense four-to-six week sessions.

In keeping with the same principle--that convenience was of greater moment than tradition--the College also abandoned the notion that a university course required a university setting. Parking as well as city traffic had been a continuing problem on the Boston campus. Partially to circumvent the traffic problem and partially to cut down on the commuting time of suburban students, the idea was conceived of bringing courses to the students. For some time, this idea was pursued on a fairly eclectic basis, with no particular consistency either in the use of facilities or in the number and kind of programs that might be provided from year to year. By 1965, it was clear that the idea answered a deep need in the community, and 1965 marked the real beginning of Northeastern's satellite campus system. Facilities in two high schools, one in Framingham and a second in Weymouth, were contracted for on a relatively permanent basis with comprehensive evening programs planned for each. In the course of the next decade, other high school facilities were rented, and the system flourished so that by 1975 fully 40 percent of all University College students were attending classes in the several facilities outside the Boston area.

It was also in the mid 60's that University College realized the full potential of the suburban campus in Burlington. The total effect of this ex-urban expansion was not only to add to University College's constituency, but also to make possible new programs. Outstanding among these were the ones for women. Thus, long before women's liberation became the catch phrase of the decade, University College had taken the initiative by providing courses at convenient locations and hours that would allow housewives to update their skills and prepare for reentry into the job market.

During these years, both traditional and professionally oriented programs grew to the point where in 1971 alone, there were 90,000 course registrations. Imagination, innovation, flexibility, and most of all, response to community needs were the touchstones dictating the selection of courses. Thus, for instance, programs tailored to meet the needs of women returning to the job market expanded, and in the mid 1960's, special business courses to meet the emerging needs of black entrepreneurs were added.

The other professional programs that were developed at this time also demonstrated responsiveness to a wide variety of needs. Majors in transportation and in security and corrections were introduced. One of the fastest growing areas, however, was health science, and by 1975 the College was offering associate degrees in Respiratory Therapy, Radiologic Technology; a bachelor's degree in Medical Technology, Cytotechnology,

Medical Record Science, Management of Health Agencies and Institutions; and certification programs in Nursing Home Administration as well as a unique eighteen-month physician's assistant course.

At the same time, traditional part-time programs also expanded, leading to the associate or bachelor's degree in almost forty fields of study. In spite of the rapid growth and wide choice of programs available in the late 1960's and early 1970's, the criteria for course selection remained basically the same as they had been at the inception of the College--suitability to the needs of the older professional students. By 1975, the College enrolled 12,000 students who were taught by 700 part-time faculty members.[1]

Since 1975 University College has continued its growth, and currently employs over 1,000 part-time faculty members and enrolls approximately 16,000 students per year. Over the years the composition of the student body has changed, and now well over half the students are women.

In time the needs of students and faculty have also changed. Periodic surveys of students have enabled the College to modify its curricula and services, and a variety of faculty support services, such as faculty development workshops, have been designed to assist faculty in their professional growth. Recent curricular innovations include a degree program in technical communications, a completely redesigned business administration program, a computer systems specialist program, several certificate programs in communications, law enforcement, and business, and a history course taught in affiliation with the local public television station. These new programs serve both degree and nondegree students, and many of them are directly related to students' career development.

In the area of student support services University College has been at the forefront in its development of open houses to orient new students to the University, a tutorial program, a modified cooperative education program, career development courses, career counseling, and job placement services. The publications of University College have also been upgraded and expanded to include a combined quarterly faculty/student newsletter and comprehensive information guides for students which are published quarterly.

The growth in faculty and students has also been reflected in an expansion of the College's branch campus locations, so that in addition to the Boston, Burlington and Dedham campuses, the College boasts the development of thirteen sites at which

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[1] Adapted from: Frederick, Antoinette. Northeastern University. An Emerging Giant: 1959-1975. Boston: Northeastern University, 1983, p. 95-104, 241-261.

adult students can enroll in courses near their home or place of work. Recently the College has also conducted a systematic outreach program to hundreds of companies representing major business and industry in the greater Boston area who are interested in making their employees aware of the academic programs and services of the College.

In short, at a time when many institutions of higher education throughout the country are expressing concern about decreasing enrollments, University College is looking forward to what appears to be significant growth and expansion. Lifelong learning is much more than a concept, and it is difficult to imagine a more vivid example of its realization than at University College.

CONTINUING EDUCATION AT NORTHEASTERN

Associate Dean John H. Robbins
Center for Continuing Education
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In 1960, as Northeastern began to expand its degree granting programs for adults, it also began to expand its nondegree adult, part-time education programs. The Office of Adult and Continuing Education was established to be responsible for expanding and developing the University's special nondegree programs and services, for directing the promotional activities for all evening programs that were of special interest to business and industrial-employed personnel, and for supervising the administrative staff involved in all evening operations. From this point on, Continuing Education was understood as referring exclusively to noncredit programs that were directed toward the immediate developmental needs of a largely professional and adult constituency.

In 1963, the Office of Continuing Education became the Center for Continuing Education, a name reflecting a new centrality of purpose. The responsibilities of the Center encompassed two major duties: (1) maintaining a close liaison with the community and with units of the University to discover new needs for short-term, non-credit programs; and (2) designing, developing and operating such programs. Implicit in the latter responsibility was the securing of part-time personnel to conduct courses for it was determined from the beginning that in the interest of authenticity, practical programs should be conducted whenever possible by practitioners in the field under consideration and that in the interest of flexibility, full-time staff should be kept minimal. Further, it would be the responsibility of the Center to determine suitable times and places to conduct courses as convenience is a major factor in the success of short-term courses.

At the time, there were three programs: The Bureau of Business and Industrial Training, Special Programs in Cooperation with Civic Groups, and Special Programs in Cooperation with Professional and Trade groups. Shortly after, still a fourth division was added--State-of-the-Art. The term, coined at Northeastern and destined to become part of the educational vocabulary, referred to programs specifically formulated to update and stretch the competence of engineers and scientists, two disciplines that were subject to rapid change.

In the 1980's as an important part of the Northeastern community, the Center for Continuing Education focuses on pragmatic training needs. Thus, the Center offers a series of cost-effective, intensive seminars, conferences, forums, and a wide range of special courses designed to serve the specific

needs of professionals in the following areas: business and industry, civic organizations, educational institutions, allied health professions, urban mass transportation, trade and professional associations, and volunteer administration.

The Center for Continuing Education has about 7,500 students enrolled in non-credit continuing education courses. Programs are held both on and off campus and serve a full and part-time student body that ranges in age from 20 to 70 years. All participants are considered lifelong learners, part of the mainstream of higher education although students generally work full-time and attend courses on a part-time basis. Recently, a new category of students has emerged: women who had decided to leave formal education, but who now are re-entering higher education.

Advisory committees, professional societies, and local industry evaluate and suggest changes in the Center's programs. The Center also is considering forming consortia with other institutions to develop new approaches to teaching and learning, including expanded use of educational technology.

The Center's mission is closely related to the technological manpower needs especially of Massachusetts, but increasingly also for the rest of the country. Program graduates are currently employed both nationally and in many parts of the world.

PROGRAM OFFERINGS

Allied Health Programs - Part-time programs in Nursing, Advanced Cardiac Life Support and Emergency Medical Technician (EMT) Basic, and Paramedic full-time day instruction and clinical experience.

Graphic Arts Management - Professional certified courses in design, printing, publishing, and advertising are taught by faculty members whose backgrounds combine both professional and educational experience.

Insurance Institute - Tailored to the needs of professionals in the insurance industries, this program provides professional development for the practicing insurance agent.

Urban Mass Transportation - This national program is designed to develop improved ways of meeting the unique challenges facing management personnel in the urban mass transportation industry.

State-of-the-Art Program - Since 1964 the State-of-the-Art Program has offered a comprehensive program of non-degree evening courses and seminars to meet these needs at every level - from advanced engineering and technical management to introductory

computer literacy. Through reevaluation, upgrading and expansion of course offerings, the latest technological developments are reflected in such areas as: Telecommunications, Microcomputer Systems, Computer Automation, Artificial Intelligence, Software Engineering, Programming Languages, Semiconductor Science, Microelectronics, Manufacturing Technology and Materials Science. State-of-the-Art courses and seminars are intensive and highly interactive. Faculty members are leading contributors and practitioners from industry, academe and government, and facilities are well-equipped with state-of-the-art laboratories to give participants maximum hands-on practice.

In-House Management Programs - The Center offers individually designed programs to meet the unique needs of each organization. Comprehensive programs are developed after close consultation with management to determine the organization's goals and objectives. Offered to all levels of management, programs range from basic supervisory skills to executive development, and may include communication exercises, transactional analysis, and other interactive techniques. The Center's emphasis is always collaborative problem solving.

The Seminar Center - Northeastern University created its Seminar Center because it recognized the need for a responsive vehicle with which to meet the needs of a fast-paced society. Intensive, practical, inexpensive, quality seminars are offered through this continuing education facility. Seminars are tailored to complement or enhance in-house educational capabilities or to perform the entire training function for those organizations that do not have their own professional training staff.

Residential, In-House, On-Campus - Programs may be conducted at Northeastern's facilities or at other locations convenient to organizations. The Center provides both long- and short-term programs such as one- and two-day seminars and workshops, a series of weekly sessions (days or evenings), and residential programs that last from two days to one month or longer.

FACULTY

Over 400 faculty members participate annually in the Center's programs. They include resource people from Northeastern and other colleges and universities and recognized leaders and practitioners in business and other professions.

CONTINUING EDUCATION UNITS (CEUs)

All courses offer Continuing Education Units (CEUs), nationally recognized units awarded for participation in qualified continuing education programs. One CEU is awarded for every 500 contact minutes of such participation.

LIVE INSTRUCTION AT THE WORKPLACE VIA TELEVISION

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In September 1983, Northeastern University began large-scale delivery of live, interactive instruction to remote classroom sites using television. The program, entitled "Network Northeastern" uses Instructional Television Fixed Service (ITFS) and telephone as its technologies and represents the culmination of efforts of two types: 1) long-range planning, development, and resource acquisition/preservation by university administration and experts in educational technology; and 2) intensive, short-term implementation of plans by a team comprised of these educational technologists, faculty, support staff, and university administrators. In this article, we will discuss the events leading to the initiation of the program, the prerequisite resources, and important project decisions. In doing so, we will provide a schema for those institutions considering undertaking the use of technology in improving and/or delivering instruction.

Northeastern University has always been interested in designing programs that make education more relevant and available to adult learners. Its cooperative education programs (CIHED Newsletter, Vol. 4, No. 2, 1981) and the suburban campus concept are examples of such efforts. The concern of educational technology likewise is to make learning more fruitful. As technologies for instruction developed, and as new resources for learning became available, Northeastern University made these a part of its operation. From the early programmed learning efforts, through the acquisition of the first "media" materials, to the construction of television production facilities and ITFS broadcast capability, the University kept pace with the technologies of education. But it did something equally, if not more, important. It created a structure, a unified service with professional staff trained in educational technology. The Office of Educational Resources (now the Office of Learning Resources) was established to administer and oversee the appropriate use of the resources and to prepare for the University's response to future technologies and new kinds of students. In the past two decades, and especially in the past three years, such changes have been rapid and universities have had to respond quickly to meet new needs. Northeastern's background and resources in educational technology have made these responses more simple and more effective.

The early 1980's were critical for universities interested in telecommunications. Technologies were available and a great demand for adult and continuing education programs had arisen.

Specifically, learners wanted educational programs delivered to the workplace or to the home. Traditional means of providing instruction were insufficient and the answer lay in "telecommunications". Educational institutions in the Boston area were awakened to the potential of telecommunications when it was announced that the cable television franchising process was beginning in Boston. Traditional competition for students took on an electronic aspect as institutions claimed programs and systems of telecommunications which could satisfy the new demands. However, few institutions were prepared to move ahead with such schemes. Northeastern was fortunate to have resources, experience, and expertise available and it had a great advantage: ITFS.

Instructional Television Fixed Service (ITFS) was created in 1963 when 31 television channels in the microwave spectrum were set aside for educational and service use. The channel allocation scheme and frequencies are shown in Table 1.

TABLE 1

FREQUENCY ASSIGNMENTS
for Instructional Television Fixed Service

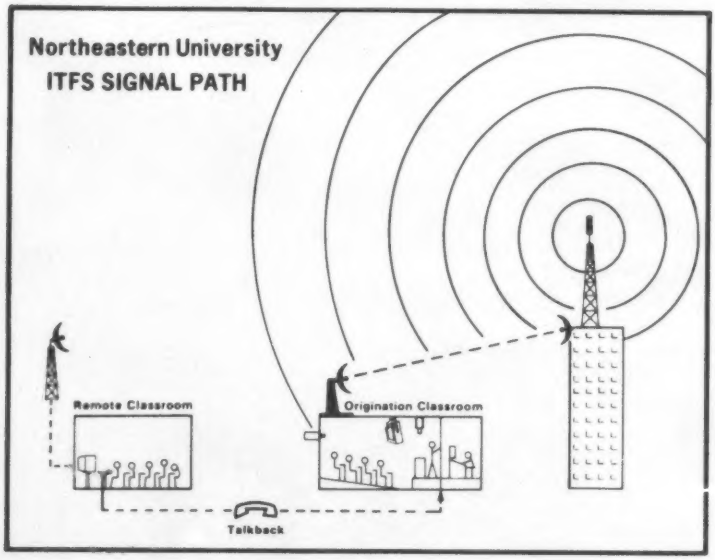
GROUP	CHANNEL NUMBER	BAND LIMIT, MHz	GROUP	CHANNEL NUMBER	BAND LIMIT, MHz
A	A-1	2500-2506	E	E-1	2596-2602
	A-2	2512-2518		E-2	2608-2614
	A-3	2524-2530		E-3	2620-2626
	A-4	2536-2542		E-4	2632-2638
B	B-1	2506-2512	F	F-1	2602-2608
	B-2	2518-2524		F-2	2614-2620
	B-3	2530-2536		F-3	2626-2632
	B-4	2542-2548		F-4	2638-2644
C	C-1	2548-2554	G	G-1	2644-2650
	C-2	2560-2566		G-2	2656-2662
	C-3	2572-2578		G-3	2668-2674
	C-4	2584-2590		G-4	2680-2686
D	D-1	2554-2560	H	H-1	2650-2656
	D-2	2566-2572		H-2	2662-2668
	D-3	2578-2584		H-3	2674-2680
	D-4	2590-2596			

In the late 1960's, Northeastern became interested in ITFS and applied for Federal Communications Commission (FCC) licensing to broadcast in the Boston area. ITFS broadcast perimeters with a normal power of 10 watts are approximately 25 miles. Licenses were granted and the first broadcasts took place in 1969. In the 1970's regular but limited transmissions to the Boston and Burlington campuses took place. In 1980 the FCC proposed that ITFS spectrum space should be reallocated for commercial use. Opposition to this proposal preserved 20 of the ITFS channels for education and in the process of opposing the legislation, Northeastern applied to upgrade its ITFS output system to four channels. That application was approved in 1982.

Early in 1983 two critical commitments were made: 1) to move forward as quickly as possible with upgrading of the broadcast system; and 2) to allow courses to be taught and telecast simultaneously. This second commitment is often overlooked in discussions of the use of technology. It is only when faculty and departments agree to use such systems that the systems become effective. Hardware without software accomplishes little and the history of educational technology is littered with promising methods and machines which could have worked but were never used.

Implementation of plans began in the Spring of 1983 and by September the curriculum and the system were ready. Northeastern now broadcasts on four 10 watt channels, its antenna being located atop an 800 foot building in Boston. Signals are sent to this facility on four additional ITFS channels used as studio-to-transmitter links (STL). Figure 1 provides a schematic of the Northeastern ITFS signal path.

Figure 1



Receiving sites at participating businesses are equipped with ITFS antennas and signal conversion equipment. Students view courses on normal television receivers and are connected to the originating classroom and their teacher via telephone. Administrative matters are coordinated through the Network Northeastern office and a courier service transports printed materials, assignments, and other paperwork between the University and the business sites.

The present curriculum centers around graduate engineering education. A Bachelor of Engineering Technology is offered in the evening hours and other courseware is broadcast at various times during the week. Expansions of curriculum offerings are planned to meet new demands and to serve new business clients. Ultimately, the system may be enlarged to accommodate other courseware and additional transmission requirements for data exchange or rebroadcast of programming from other sources such as satellites. For the moment, ITFS has proven itself a valuable technology and an excellent means of delivering education to distance sites.

As is often the case with technological innovations, a period of optimum value is achieved when the technology provides a unique service for which there is substantial demand. Such is the present case with ITFS. It is a relatively unique vehicle with a relatively low cost and a high degree of efficiency. But times and technologies are changing. Within the past five years, the costs of technologies such as fibre optics and satellite receiving equipment have dropped dramatically. Direct broadcast satellite (DBS) services have been instituted direct to home viewers. Interactive cable systems allow sophisticated programs and services to be delivered easily and quickly. Interconnected systems provide statewide, regional, and even national networks for information distribution. All these technologies are growing in both size and sophistication. Although ITFS remains one of the premier educational telecommunications technologies, ITFS license holders can no longer assume to hold the only means of delivering their products. By 1990, most educational institutions will have access to some form of telecommunications for delivery of distance programs. ITFS will remain an important part of the telecommunications strategies of many institutions but its uniqueness, and thus its value will be reduced. With this will come new evaluations of delivery alternatives. The wise institutions will be those which appropriately match their present and future needs with the capabilities of the available technologies and the demands of their clients. Flexible programs, as well as flexible systems will be required to respond to this future.

SELECTED JOURNALS AND DOCUMENTATION

LIFELONG AND CONTINUING EDUCATION

Alternative Higher Education. The Journal of Nontraditional Studies. Human Sciences Press, 72 5th Avenue, New York, N.Y. 10011

Canadian Journal of University Continuing Education. 153 Johnston Hall, University of Guelph, Guelph, Ontario, Canada N 1G 2 W1.

Convergence. 29 Prince Arthur Avenue, Toronto, Ontario, Canada M5R B2.

Distance Education. Darling Downs Institute Press, Toowoomba, Queensland 3350, Australia.

Education Permanente. Université de Paris-Dauphine, Place de Lattre de Tassigny, F-75775 Paris, Cedex 16, France.

International Journal of Lifelong Education. Taylor & Francis, 4 John Street, London WC1 N2ET, England.

Awareness Bulletin: Lifelong Education. International Bureau of Education, Palais Wilson 1211, Geneva 14, Switzerland.

New Directions for Continuing Education. Jossey-Bass Publishers, 433 California Street, San Francisco, CA 94104.

National Institute of Adult Education Computer Bank of Research Items on Adult Education. 19B de Montfort Street, Leicester LE1 7GE, England.

ERIC Clearinghouse. Adult, Career and Vocational Education. Ohio State University, Center for Vocational Education, 1960 Kenney Road, Columbus, Ohio 43210.

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